

## **ABSTRACT**

A dual polarized variable beam tilt antenna (10)  
5 having a plurality of offset element trays (12) each  
supporting pairs of dipole elements (14) to orient the  
dipole element pattern boresight at a downtilt. The  
maximum squint level of the antenna is a consistent  
downtilt off of boresight and which is at the midpoint  
10 of the antenna tilt range. The antenna provides a  
high roll-off radiation pattern through the use of  
Yagi dipole elements configured in this arrangement,  
having a beam front-to-side ratio exceeding 20 dB, a  
horizontal beam front-to-back ratio exceeding 40 dB,  
15 and is operable over an expanded frequency range.